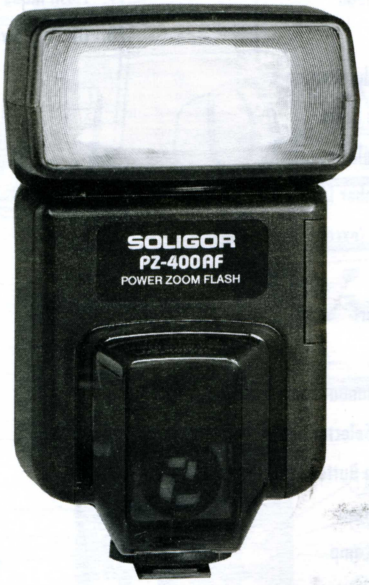
SOLIGOR PZ-400 AF

Instruction Manual



Introduction

Thank you for purchasing this SOLIGOR PZ-400 AF flash. It is specifically developed to suit Autofocus SLR camera systems. In order to enjoy this flash unit at a maximum and to take utmost advantage of its features, we recommend to read these instructions carefully before using the flash. Please also refer to the instruction manual of your camera with regard to flash photography.

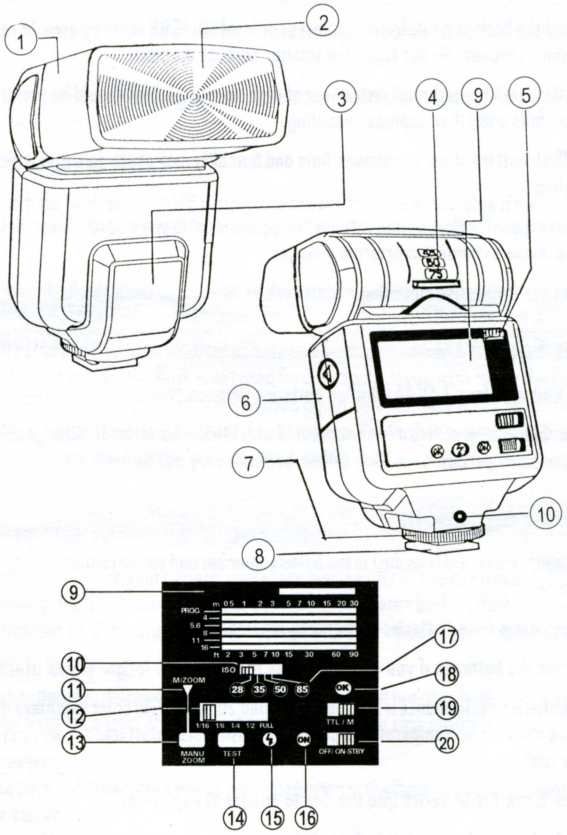
Nomenclature

1. Zoom Flash Head
2. Diffusor
3. AF Infrared Illumination
4. Bounce Angle Scale
5. Film Speed Selector
6. Battery Chamber Lid
7. Locking Ring (except for Minolta)
8. Shoe
9. Exposure Chart
10. ISO Display
11. Display for Manual Zoom Function
12. Power Ratio Selector
13. Manual Zoom Button
14. Flash Test Button
15. Flash Ready Lamp
16. Power ON Indicator
17. Zoom Display
18. Exposure Control Display (OK)
19. Flash Mode Selector
20. ON/OFF Switch

SOLIGOR PZ-400 AFC = for Canon Autofocus Cameras

SOLIGOR PZ-400 AFN = for Nikon Autofocus Cameras

SOLIGOR PZ-400 AFM = for Minolta Autofocus Cameras



Caution

Before the usage of the flash unit, read and follow these security instructions:

- To store the energy this flash unit boasts of an electrolytic capacitor which works with high voltage cirtuitry. Do not try to repair the flash unit and do not open the flash housing.
- Should the flash prove defective contact your local SOLIGOR service agent. In case the flash housing is broken, do not touch the interior parts of the flash.
- This flash unit is a technical instrument of high precision which should be protected against shock, falls and other improper handling.
- The flash unit is not water resistant. Rain and humidity may cause damages which cannot be repaired.
- Do not expose the flash unit to extreme temperatures as they may occur in cars or in direct sunshine. Avoid extreme temperature changes.
- Never use aggressive cleansing agents such as benzine to clean the flash.

Power Source

The flash unit uses four 1.5V AA alkaline batteries (Mignon type).

As an alternative power source it can be operated with lithium batteries or rechargeable NiCad batteries of the same performance. Zinc-carbon batteries may not be used.

Battery Precautions

- Make sure that there is no dust in the battery chamber and on the contacts before loading the batteries.
- Always use 4 fresh batteries of the same type and brand.
- Remove the batteries if you plan not to use the flash for a longer period of time.
- The batteries' performance is at its best at around 20°C/70°F. In order to achieve its full performance also at lower temperatures, protect the flash unit against cold e.g. by carrying it under your coat.
- Never throw the batteries into fire due to danger of explosion.
- Due to danger of explosion make sure to recharge only NiCad batteries.

- Protect your environment making sure that the batteries will be given to proper waste disposal after use.

Loading the Batteries

1. Open the battery chamber lid by sliding it in direction of the arrow. The flash must be switched off.
2. Insert four AA batteries making sure to respect the correct plus/minus order as shown inside the battery chamber.
3. Close the battery chamber.
4. Now switch the flash on (ON/OFF switch). The power ON indicator will glow if the batteries are properly loaded. Press the test flash button to fire a flash manually.

Auto Power Off

The SOLIGOR PZ-400 AF flash unit boasts of an auto power off function which helps to save the batteries' energy. It is activated if the flash is not used for app. 2 min. If you wish to use the flash again move the ON/OFF switch to OFF and to ON positon again. Alternatively it can be reactivated by slightly pressing the shutter release button of your camera. The flash is now ready to fire again. If you do not wish to use the flash for a longer time, switch it off.

Mounting the Flash on Your Camera

Before mounting the flash to your camera, make sure that the ON/OFF switch is in OFF position and that the mounting ring if fully turned to upper position. The camera's built-in flash must be off function and in inserted position. Now slide the flash onto the hot-shoe of your camera.

Canon & Nikon Cameras:
Rotate the mounting ring downwards to fix the flash properly and to assure best contact. If you wish to remove the flash from your camera, first turn the mounting ring upwards.

Minolta Cameras:
To remove the flash unit from your camera, press the button at the flash shoe to unlock while removing from the camera.

AF Autofocus Infrared Illumination

The SOLIGOR PZ-400 AF boasts of an autofocus infrared illumination.

Autofocus SLR cameras require a certain minimum contrast for correct focusing. It may happen that under poor light conditions the contrast of the object is insufficient for autofocus. In these cases the autofocus infrared illumination of the flash is activated by slightly pressing the shutter release button. This illumination assists the autofocus of your camera to recognize structures and contrasts even in darkest rooms. The autofocus illumination ranges from 1 to 8 m / 3.3 to 26.3 ft. If your camera system also boasts of an autofocus illumination, the camera's illumination has first priority.

In order to ensure a proper function of the autofocus illumination, make sure that your camera is switched to »single frame« mode. Using Nikon autofocus cameras, the autofocus program mode with priority on focus (A or S) should be selected. For the Nikon F5 model only, the middle focusing frame must be activated.

Exposure Chart

The exposure chart is located on the rear of the SOLIGOR PZ-400 AF flash unit. It lists he distances the illumination of the flash will cover. As coverage depends on both the film speed and the focal length in use, the film speed selector must be set according to the film speed in use. The ISO marking must be set in accordance with the focal length of your lens. Now the chart shows the coverage for the apertures F4 to F16 resp. program mode.

Exposure Control Display (OK)

The SOLIGOR PZ-400 AF boasts of an exposure control display which will confirm correct illumination after a picture has been taken. A green OK light will glow for app. two seconds. In case of no confirmation, you might wish to take the picture again choosing a shorter distance.

Power Zoom Flash Head

Using lenses with different focal lengths, the angles of view will also differ. Example: a 28 mm wide angle lens will provide a larger angle of view than a 85 mm telephoto lens. The SOLIGOR PZ-400 AF boasts of a power zoom flash head which automatically adopts the angle of illumination of the flash to the angle of view of your lens within a focal length range of 28 to 85 mm. Should your camera not provide the necessary function, the zoom flash head can also be adjusted manually. Press the zoom button repeatedly until the desired focal length is shown on the zoom display. The manual zoom display will confirm your selection in manual zoom mode.

Indirect Flash

The SOLIGOR PZ-400 AF flash boasts of a bounce and swivel head which offers the possibility to change direction of the flash up to 330° in horizontal direction and up to 90° in vertical direction. You can avoid firing flashes directly onto your objects, by directing the flash head to a reflecting surface. For colored pictures best results may be expected with white walls and ceilings. Indirect flash photography offers the following advantages:

- Shadows of your object can be avoided
- Red-eye reduction
- Equal, soft and diffuse illumination can be achieved
- Light reflections from shining surfaces such as glasses can be reduced

The bounce angle can be read from the chart at the rear side of the flash. Please take into consideration that for indirect flash photography the distance must be calculated as follows: Distance of the flash to the reflecting surface plus distance of the reflecting surface to the object. The TTL flash mode will control these distances automatically.

Red-Eye Reduction

Red-Eye is caused by reflection of the flash light by the eye's retina. This effect mostly happens when the flash light is directed almost parallel to the optical axis. It mostly occurs in low light, when pupil of the eye opens wider. The best way to eliminate red-eye is indirect flash. The design of the SOLIGOR PZ-400 AF additionally helps to avoid red-eye as the flash head is located at a "safe" distance from the optical axis of the camera. The larger the incident angle of the flash light, the less the red-eye will happen.

TTL Auto Flash Mode

When the flash is mounted to your camera, switch the camera on, then select the automatic program mode and switch the flash on. The power ratio selector must be set on "Hi". When the flash ready light glows, you can press the shutter release button of your camera to start taking pictures. The TTL Auto Flash mode automatically controls the flash light for correct exposure of your object. The flash light is being reflected by the object and measured through the lens (TTL) at the film surface. As soon as sufficient light for correct exposure has been measured, the flash will fire – controlled by thyristor circuitry – the necessary amount of light. Simultaneously the best aperture

and exposure time will be set at your camera. The TTL Auto Flash mode offers a highly precise exposure and is easy to handle. In addition this mode boasts of the following advantages:

- No camera settings required
- Lens extensions (e.g. with extension tubes) are automatically recognized
- Filter factors are automatically taken into consideration
- Variable apertures of zoom lenses are automatically recognized
- Only the light required for correct exposure is measured (TTL)

TTL Flash Control with Auto Exposure

The auto exposure program of your camera can be combined with the TTL auto flash. Set the auto exposure mode at your camera. Now the desired aperture can be set manually. Please keep in mind that the flash range will decrease with small apertures (such as F11 or smaller). Your camera will automatically choose the correct flash synchronization. With the assistance of the TTL auto flash mode best results may be expected.

TTL Flash Control with Auto Aperture

Set your camera to the auto aperture mode. Now exposure time can be selected manually. Please do not choose shorter exposure times than the camera's x-syncronization (most AF cameras will not allow shorter exposure times). The TTL auto flash mode and the auto aperture mode will take care of correct exposure.

Manual Flash

Set your camera to manual operation. Now select synchronization and aperture at your camera manually. Do not choose a synchronization shorter than the camera's x-syncronization. The flash range now depends on the selected aperture. Please check the information at the exposure chart of the flash. For this purpose adjust the film speed in use at the flash in a way that it will align with the focal length in use. Now you can read the distance the flash will cover with the relevant aperture setting.

Power Ratio Selector

The SOLIGOR PZ-400 AF features a power ratio selector. Using the manual flash mode, the following power ratios may be chosen: 1/2, 1/4, 1/8 or 1/16 of the maximum power.

Reduced power selections are recommended for continuous shooting requiring short flash recycling times, e.g. for sport photography.

Flash Synchronization

Synchronization times mean shutter speeds which will allow flash photography. Special attention must be paid in case of short shutter speeds. Each camera model features a "shortest" synchronization the so-called x-synchronization. Please check with the instruction manual of your camera. Do not use shutter speeds shorter than the camera's x-sync for flash photography in order to avoid wrong exposure.

Using the SOLIGOR PZ-400 AF flash unit with TTL mode the x-synchronization of your camera will be set automatically.

Fill-in Flash at Daylight

On sunny days there is enough brightness for perfect exposure. However, depending on the sun's position their might appear shadows in an unsuitable position of your object. Backlit shots will cause under exposure for the main subject. In order to avoid the afore-mentioned problems and to improve your picture results with regard to colors,contrasts and brilliance, flash photography is recommended even on sunny days

Slow Synchronization

When the ambient illumination of your object is poor, it can be difficult to balance brightness for both your subject and its background. For these situations, a longer shutter speed is recommended. So the main subject will be illuminated by the flash, whereas for the background (which would become dark with a standard flash setting) similar light conditions as for the subject can be achieved. Slow synchronization is a versatile instrument for special effects, e.g. portraits taken at night time at illuminated places such as fairgrounds or shopping malls.

Set your camera to auto aperture mode, so that you can select a long shutter speed. Some camera models will allow the slow sync photography also in the auto programm or auto exposure mode. Using a tripod out of the SOLIGOR product line will ensure that your pictures won't get out of focus.

Specifications

Guide No. at ISO 100:

Focal Length	G. No. 1/1	G. No. 1/2	G. No. 1/4	G. No. 1/8	G. No. 1/16
85	40	28	20	13	10
50	36	25	18	12	9
35	32	22	16	11	8
28	28	20	14	10	8

Flash Range at ISO 100:

Focal Length/ Aperture	28mm	35mm	50mm	85mm
F 4	0.7-7m	0.7-8m	0.8-9m	0.8-10m
F 5.6	0.7-5m	0.7-5.7m	0.8-6.4m	0.8-7.1m
F 8	0.7-3.5m	0.7-4m	0.8-4.5m	0.8-5m
F 11	0.9-2.5m	0.9-2.9m	0.9-3.3m	0.9-3.6m
F 16	0.9-1.8m	0.9-2m	0.9-2.2m	0.9-2.5m

Power Zoom: automatic motorized adjustment of the zoom flash head with the following steps: 28, 35, 50 and 85mm; manual adjustment possible.

Bounce Angle: 0 - 90°

Swivel Angle: 150° to the right and 180° to the left (total 330°)

AF Infrared Illumination: ranges abt. 1 to 8m / 3.3 to 26.3 ft

Exposure Control Display: green LED at the rear side of the flash

Flash Ready Lamp: red LED on the rear side of the flash

Flash Duration: 1/1.000s - 1/20.000s

Flash Recycling Time: 0.5 to 8s with fresh alkaline batteries or
0.5 to 7s with freshly charged NiCad battery packs

Number of Flashes:	150 to 2.000 flashes with fresh alkaline batteries or 80 to 1.000 flashes with freshly charged NiCad battery packs
Color Temperature:	app. 5600 K like daylight films
Flash Test Button:	at the rear side of the flash
Power Source:	4x1.5V AA alkaline batteries (Mignon-type) or NiCad battery packs of similar performance
Weight:	280g (without batteries)
Dimensions:	185 x 76 x 60 mm

Specifications are subject to change without notice.

Flash Functions Available with Canon AF Cameras:

Flash Function	Auto Adjustment to the Camera's x-Flash Synchronization	AF-Infrared illumination	Flash Ready Indication in Viewfinder	TTL Flash Control	Manual Flash Control	Power Zoom
EOS 500 N	●	x[1)]	●	●	●	●
EOS 50	●	●	●	●	●	●
EOS 5	●	x[1)]	●	●	●	●
EOS 1	●	●	●	●	●	●
IX	●	x[1)]	●	●	●	●

The SOLIGOR PZ-400 AF can also be used with former Canon Autofocus Cameras if the camera provides the relevant function.

● = Function availalbe

x = Function not available

[1)] = The camera's integrated Autofocus illumination will be used.

Flash Functions Available with Nikon AF Cameras:

Flash Function	Auto Adjustment to the Camera's x-Flash Synchronization	AF-Infrared illumination	Flash Ready Indication in Viewfinder	TTL Flash Control	Manual Flash Control	Power Zoom
F 601 AF	●	●	●	●	●	x
F 50	●	●	●	●	●	x
F 70	●	●	●	●	●	●
F 90 (X)	●	●	●	●	●	●
F 4	●	●	●	●	●	●
F 5	●	●	●	●	●	●
Pronea 600i	●	●	●	●	●	●

The SOLIGOR PZ-400 AF can also be used with former Nikon Autofocus Cameras if the camera provides the relevant function.

Flash Functions Available with Minolta AF Cameras:

Flash Function	Auto Adjustment to the Camera's x-Flash Synchronization	AF-Infrared illumination	Flash Ready Indication in Viewfinder	TTL Flash Control	Manual Flash Control	Power Zoom
300 si	●	●	●	●	●	●
500 si (Super)	●	●	●	●	●	●
600 si	●	●	●	●	●	●
700 si	●	x[1)]	●	●	●	●
Vectis S 1	●	●	●	●	●	●

The SOLIGOR PZ-400 AF can also be used with former Minolta Autofocus Cameras if the camera provides the relevant function.

● = Function availalbe
x = Function not available
1) = The camera's integrated Autofocus illumination will be used.

Warranty

SOLIGOR flash guns are under warranty for one full year from the date of purchase by the original purchaser. In case of defects in materials or workmanship, we will replace or repair the camera free of charge.

The warranty will not be honored if the flash has been mishandled or tampered with, or altered by anyone other than the manufacturer or an authorized SOLIGOR service agent.

A defective flash being returned under this warranty should be directed to the SOLIGOR service agent of your country and must be accompanied by a brief description of difficulties encountered and by a proof of purchase showing the date of purchase. All related transportation costs and insurance will be at the owner's expense.

Alteration of this warranty cannot be made without our written approval.

SOLIGOR GmbH

Photo · Optic · Video · Electronic

SOLIGOR GmbH
Photo · Optic · Video · Electronic

P.O. Box 10 01 11
D-70745 Leinfelden-E./Germany

Schulze-Delitzsch-Str. 7
D-70771 Leinfelden-E./Germany
Tel. ++49 7 11 75 90 40
Fax ++49 7 11 7 59 04 44